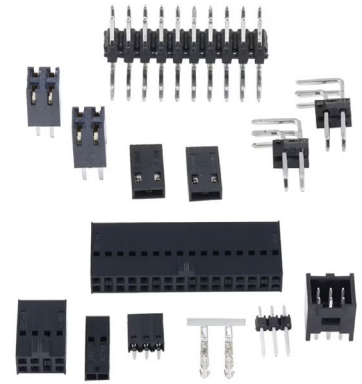


# 2.54mm (.100")-Pitch C-Grid III Modular Interconnect System >

The third generation C-Grid III 2.54mm (.001")-pitch header and receptacle interconnection system offers complete design flexibility and modular components that provide a wide of electronic packaging alternatives. C-Grid III is a highly versatile 2.54mm-interconnection system offering unique design features to meet the latest industry requirements. Two different wire termination techniques, crimp and insulation displacement, are combined in a complete interconnection system for increased reliability and versatility.



## ADVANTAGES AND FEATURES

### Offers design flexibility

These connectors are available in single- and dual-row options; the easy breakaway feature produces smaller sizes for quick turnaround; halogen-free and Glow Wire capable versions are also offered.

### Offers a cost-effective solution

Gold flash and two-sided Gold plating on contact is available.

### Allows for ease of mating

C-Grid III connectors have north and south orientations.

### Eliminates costly custom tooling, engineering and validation time needed for multi-bay configurations

The receptacle has stackable end-to-end and modular header design.

### Expedites assembly of connector systems and provides reliable mating

The crimp housing has polarization and friction-lock options.

## MARKETS AND APPLICATIONS

### Computer/Peripherals

Desktop PCs  
Office equipment  
Servers  
Monitors

### Medical

Laboratory devices  
Medical equipment

### Consumer

White and brown goods  
Home entertainment systems  
Vending machines

### Telecom/Datacom

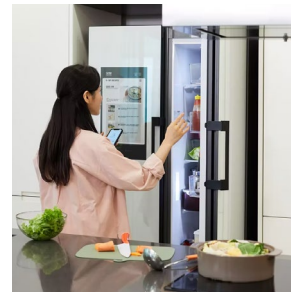
Exchange stations  
Base stations  
Control rooms

### Industrial

Industrial equipment  
Measurement equipment

### Transportation

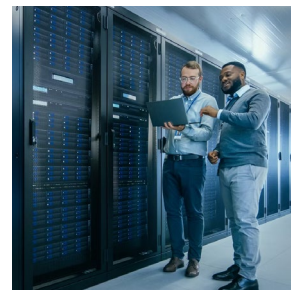
Safety system  
Engine trains  
Infotainment  
Body electronics



Home Appliances



Medical Equipment



Servers and Storage



Base Stations

# 2.54mm (.100")-Pitch C-Grid III Modular Interconnect System

## SPECIFICATIONS

### Reference Information

Product Specification: PS-99020-0001

UL File No: E29179 (excluding series

90121,90122,90136,91814)14)

CSA File No: LR19980 (for series

90059,90147,90148,90160)

### Physical

Refer to product information table on the reverse side.

### Electrical

Voltage (max.): 350V

Current (max.): 3.0A

Contact resistance (max.): 20 milliohms

Insulation Resistance (min.):

Headers and shrouded headers

5,000 Megohms

PCB connectors, crimp housings and modules

1,000 Megohms

### Mechanical

Contact Retention to Housing:

Header 20N (2.0kgf min.)

Receptacle and Crimp Terminal

15N (1.5kgf min.)

Crimp Housing:

Series 90147, 90148,90151

15N (1.5kgf min.)

Series 90152

8.8N (0.88kgf min.)

## PRODUCT INFORMATION

Headers				
Series	90120	90121	90131	90122
Options	Single Row		Dual Row	
Type	Vertical	Right Angle	Vertical	Right Angle
Circuits	1 to 20		2 to 40	
Material	Housing: 15% Glass Filled Polyester, Brass: Pins			

### Board-to-board system

Series	Options	Type	Circuits	Materials	Overall Height	Overall Mated Height			
90147	Single Row	Vertical	2 to 32	Housing: 15% Glass Filled Polyester Pins: Phosphor Bronze	8.50mm (.335")	11.00mm (.433")	11.00mm (.433")	-	-
90148	Single Row	Right Angle	2 to 32		3.30mm (.130")	3.30mm (.130")	3.30mm (.130")	-	-
90151	Dual Row	Vertical	4 to 50		8.50mm (.335")	-	-	11.00mm (.433")	11.00mm (.433")
90152	Dual Row	Right Angle	4 to 50		5.84mm (.230")	-	-	5.84mm (.230")	5.84mm (.230")

### Wire-to-board system

Series	To Use With	Type	Wire Gauge	Materials	Reeling	Packaging	Contact Retention to Housing	Normal Force
90119	Crimp Housing	Reel/Loose	22-28 AWG	Phosphor Bronze	Left Hand Feed	Reel/Bag	15 N (1.5kgf)	1N (0.1kgf)

Series	Options	Feature	Circuits	Material	Overall Height	Overall Mated Height			
90123	Single Row	With or Without Polarizing Button	2 to 32	Polyphenylene Oxide (PPO)	2.54mm (.100")	2.54mm (.100")	2.54mm (.100")	-	-
90143	Dual Row		4 to 50		5.08mm (.200")	-	-	5.08mm (.200")	5.08mm (.200")

2.54mm (.100")-Pitch C-Grid III  
Modular Interconnect System

Shrouded Headers						
Series	90136		90130		91814 (High Temp Version of 90130)	
Options	Single Row		Dual Row		Dual Row	
Type	Vertical	Right Angle	Vertical	Right Angle	Vertical	Right Angle
Circuits	1 to 20		2 to 40		2 to 40	
Material	Housing: 15% Glass Filled Polyester Pins: Brass					

Wire-to-board system

Series	Options	Circuits	Material	Overall Height	Overall Mated Height					
90156	Single Row	2 to 32	Polyphenylene Oxide (PPO)	3.81/5.35mm (.150/.211")	19.00mm (0.748")	5.35mm (.211")	-	-	-	-
90142	Dual Row	6 to 50		6.20/7.72mm (.244/.304")	-	-	19.00mm (0.748")	9.75mm (.384")	19.00mm (0.748")	9.75mm (.384")

Others

Series	Height	Material	Voltage	Current Rating	Contact Resistance	Insulation Resistance	Mating Force	Unmating Force	Durability	Packaging
90059	4.95mm (.95") max.	Housing: 30% Glass Filled Polyester Pins: Phosphor Bronze	350V	3.0A (Gold) 1.5A (Tin)	12 miliohms max. (Gold) 15 miliohms max. (Tin)	2000 Megohms max.	7N max	0.3N (Gold) 0.5N (Tin) min.	50 Cycle (Gold) 20 Cycle (Tin)	Strip/Bag

Series	Options	Circuits	Material	Feature	Overall Height	Design Config.	Use With	Use With	Packaging
90160	Dual Row	6 to 50	Polyphenylene Oxide (PPO)	Polarized Friction Side Lock Locking Ear	6.20/7.72mm (.244/.304")	Wire-to-Wire	90119 crimp terminal	QF50 90663 shrouded header with 90635 receptacle	Bag